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EXAMINER	
NGUYEN, THANH NHAN P	
ART UNIT	PAPER NUMBER
2871	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,178	NAM ET AL.	
	Examiner	Art Unit	
	(Nancy) Thanh-Nhan P. Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE 10/9/2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *43-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *43,53,56 and 58-68* is/are rejected.

7)☒ Claim(s) *44-52,55 and 57* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/27/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is responsive to the RCE dated 10/9/2007.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations (1) a sealant disposed between the first panel and the second panel and overlapping the black matrix, the light transmitting portion disposed at the overlapping and (2) the connector and the first and the second signal lines are located out of the sealant (in claim 57) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 49-55 are objected to because of the following informalities:

1. Claims 49-52 and 55 depend on claim 43. Claim 43 already claimed "wherein the conductive member comprises a connector for signal transmission between the data driving circuit and the gate driving circuit". Claim 49 continued to claim "... and the conductive member comprises a storage electrode connection connected to the storage electrode lines and overlapping the sealant and the black matrix". This limitation makes the claim unclear, and claims 50-52 and 55 are unclear with the same reason as in claim 49.

2. Claims 53, 54 and 57 are unclear as (the conductive member further comprises) a first signal line (or a second signal line) for signal transmission with the gate (or data) driving circuit.

Therefore, for the purpose of the examination, claims 53 and 54 are interpreted as:

- a first signal line for signal transmisstion between the gate PCB and the gate driving circuit
- a second signal line for signal transmission between the data PCB and the data driving circuit

If claims 53 and 54 are going to correct this way, then a gate PCB and a data PCB limitations should also add to the independent claim 43.

Further, claim 57 has limitations that make the claim unclear. The limitations are conflicted to each other: (1) a sealant disposed between the first panel and the second panel and overlapping the black matrix, the light transmitting portion disposed at the overlapping and (2) the connector and the first and the second signal lines are located out of the sealant.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 43, 53, 54, 56 and 58-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al (US 2001/0026345) in view of Suzuki et al (US 2003/0218713).

Park et al disclose (figs. 5, 6 and 11B) a liquid crystal display (LCD) comprising:

Claim 43:

- a first panel (120) including a conductive member (137) including a light transmitting portion
- a second panel (110) spaced apart from the first panel by a predetermined gap
- a sealant (141) disposed between the first panel and the second panel and overlapping the light transmitting portion

- a liquid crystal layer (not shown) filled in the gap between the first panel and the second panel, and enclosed by the sealant
- a gate driving circuit (134) (par. 0058) sending signals to the first panel
- a data driving circuit (136) sending signals to the first panel
- wherein the conductive member comprises a connector for signal transmission between the data driving circuit and the gate driving circuit

Park et al lacks disclosure of a second panel including a black matrix, and the sealant overlapping the black matrix.

Suzuki et al discloses (fig. 6) the black matrix (light shielding layer 50) overlapping the sealant (16) for the benefit of preventing contamination of the liquid crystal layer due to UV light transmitted through the sealant and incident on the liquid crystal layer (par. 0047). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a second panel including a black matrix, and the sealant overlapping the black matrix for the benefit of preventing contamination of the liquid crystal layer due to UV light transmitted through the sealant and incident on the liquid crystal layer.

Claims 53 and 54:

Park et al further disclose the conductive member further comprises, inherently:

- a first signal line for signal transmisstion between the gate PCB and the gate driving circuit (electrically – emphasis added)
- a second signal line for signal transmission between the data PCB and the data driving circuit (electrically – emphasis added)

Claim 56 is met the discussion regarding claim 54 rejection above.

Claim 58 is met the discussion regarding claim 43 rejection above.

Claims 59-61:

Park et al lack disclosure of wherein the sealant overlaps the black matrix in part; and wherein the hardening comprises: disposing a reflector located opposite the second substrate with respect to the first substrate; directing light from the second substrate to the sealant to be hardened; and wherein the light is obliquely directed to the first and the second substrates.

Suzuki et al discloses (fig. 6) wherein the sealant (16) overlaps the black matrix (50) in part and wherein the hardening comprises: disposing a reflector (on the outer surface of substrate 6 – emphasis added) located opposite the second substrate with respect to the first substrate; directing light from the second substrate (7) to the sealant to be hardened; and wherein the light is obliquely directed to the first and the second substrates. All of these features are to achieve the LCD device with excellent display quality (pars. 0048-0050). Therefore, at the time the inventions was made, it would have been obvious to one of ordinary skill in the art to have wherein the sealant overlaps the black matrix in part and wherein the hardening comprises: disposing a reflector located opposite the second substrate with respect to the first substrate; directing light from the second substrate to the sealant to be hardened; and wherein the light is obliquely directed to the first and the second substrates for the benefit of achieving the LCD device with excellent display quality.

Claim 62-64:

Park et al lack disclosure of the hardening comprises directing light from the first and the second substrates to the sealant or directing light from the first substrate/second substrate to the sealant to be hardened.

Even though Suzuki et al do not explicitly disclose the hardening comprises directing light from the first and the second substrates to the sealant or directing light from the first substrate/second substrate to the sealant to be hardened, it would have been obvious to one of ordinary skill in the art to harden the sealant by directing light from the first and the second substrate, or directing light from either one of the substrates to achieve the LCD device with excellent display quality. Therefore, these limitations do not patentably distinguish the invention.

Claim 65:

- a first panel (120) including a conductive layer (137)
- a second panel (110) spaced apart from the first panel by a predetermined gap
- a sealant (141) disposed between the first panel
- a liquid crystal layer (not shown) filled in the gap between the first panel and the second panel, and enclosed by the sealant
- wherein the conductive layer has a plurality of slits overlapped the sealant and elongated along a signal transmission of the conductive layer, and the conductive layer comprises a connector for signal transmission between a data driving circuit (136) and a gate driving circuit (134)

Park et al lacks disclosure of a second panel including a black matrix, and the sealant overlapping the black matrix.

Suzuki et al discloses (fig. 6) the black matrix (light shielding layer 50) overlapping the sealant (16) for the benefit of preventing contamination of the liquid crystal layer due to UV light transmitted through the sealant and incident on the liquid crystal layer (par. 0047). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a second panel including a black matrix, and the sealant overlapping the black matrix for the benefit of preventing contamination of the liquid crystal layer due to UV light transmitted through the sealant and incident on the liquid crystal layer.

Claim 66:

- wherein the conductive layer extends along the signal transmission

Claim 67:

- wherein the slits form at least two rows along the signal transmission

Claim 68:

- wherein width of the slits is equal to or larger than distance between the slits

Allowable Subject Matter

Claims 44-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reason for allowance:

There is no prior art of record that teaches or suggests a liquid crystal display comprising a relationship of various elements as claimed with the specific allowable subject matter cited in the following claims:

- a conductive member including a light transmitting portion; wherein the conductive member comprises a connector for signal transmission between the data driving circuit and the gate driving circuit; and wherein the light transmitting portion includes at least one transparent area and at least one opaque area

Response to Arguments

Applicant's arguments with respect to claims 43 and 49-68 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6835896.

US 2002/0051110.

US 2003/0038913.

US 2003/0117567.

US 2004/0125308.

US 6771348.

US 2005/0151920.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
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TN

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